CHAPTER 6: PRESS SECTION

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LED PSEN Paper sensor
– Light up when light path is blocked
LED PRSS Pressure detection sensor
– Light up when light path is blocked
Test Mode No. 6 Paper sensor
– Short interval beeps when light path is blocked
No. 7 Pressure detection sensor
– Short interval beeps when light path is blocked

THEORY OF OPERATION

1. Press System (Activate by the Pressure detection sensor)

- Conversion of Rotation to Up-and-Down Motion via Pressure Cam

The Pressure cam, which is attached to the Main pulley, continuously rotates clockwise via the Main belt, which drives the Main pulley, when the Main motor rotates.

The rotation of the Pressure cam provides the drive for the Linking plate.

As the cam follower of the Linking plate contacts the Pressure cam, the high and low points of the cam convert the rotation movement of the cam to an up-and-down motion of the Linking plate.

- The Up-and-Down Motion of Pressure Hook

The up-and-down motion of the Linking plate is conveyed to the Pressure hook through the Pressure links. The Pressure hook moves up and down with the Pressure shaft as the fulcrum.

- Operation of Pressure Solenoid

The Pressure solenoid, which is attached to the Pressure hook and Hook lever assembly, functions to engage the Hook lever assembly with the Pressure lever.

- Control of Pressure Solenoid

The Pressure solenoid is activated ON when paper is detected by the Paper sensor while the Print signal is output (ON). When the Pressure solenoid is activated ON, the Hook lever assembly is engaged with the Pressure lever. Then, moment the the light path of the Pressure detection sensor is turned from the shut-off state to the light sensing state, the paper sensor is checked. If the next sheet of paper has reached the paper sensor, the Pressure solenoid will remain turned on.

For this reason, the Hook assembly is kept hooked on the Pressure lever. If the next sheet has not reached the paper sensor, on the contrary, the pressure solenoid will be turned off once, and turned on again when the next sheet shuts off the light path of the paper sensor.

- Lifting of Pressure Roller

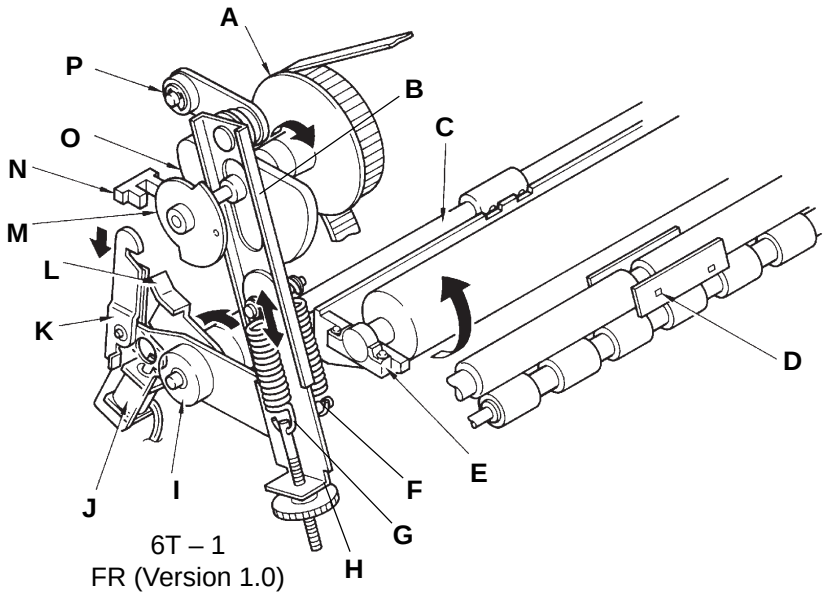
While the Hook lever assembly is engaged with the Pressure lever, the Pressure lever is pulled down by the descending Hook lever, turning the Pressure shaft counter-clockwise because the Pressure lever is attached on the Pressure shaft.

To the Pressure shaft is attached the Pressure roller support on which the Pressure roller is placed. Therefore, when the Pressure shaft rotates counter-clockwise, the Pressure roller is lifted up to the Drum, pressing a sheet of paper against the Drum.

- Function of Pressure Links

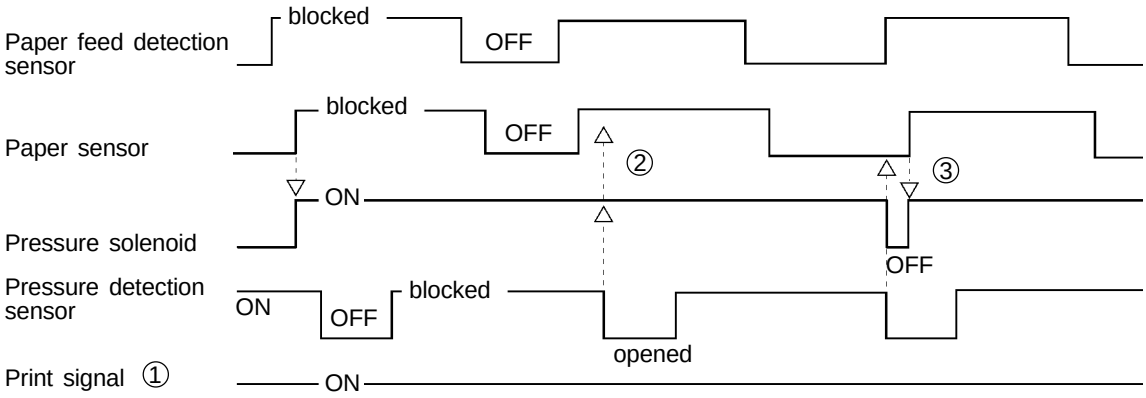
While the Pressure roller is in contact with the Drum, the Pressure link (top) is raised by the Pressure cam, pulling the Pressure springs A and B to apply pressure to the Drum and transfer ink from the Drum onto a sheet of paper.

A: Main shaft
B: Pressure link (top)
C: Pressure shaft
D: Paper sensor
E: Pressure roller support
F: Pressure spring B
G: Pressure spring A
H: Pressure link (bottom)
I: Pressure hook
J: Pressure solenoid
K: Hook lever assembly
L: Pressure lever
M: Pressure disc
N: Pressure det. sensor
O: Pressure cam
P: Linking plate

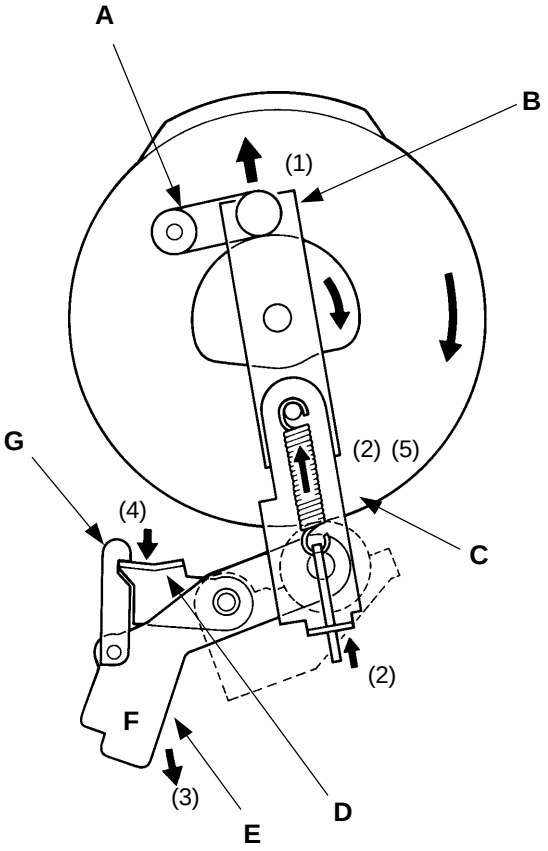


Test Mode No.6 Paper sensor
– Short interval beeps when light path is blocked
No.7 Pressure detection sensor
– Short interval beeps when light path is blocked
No.68 Pressure solenoid

Pressure Solenoid Operation Timing Chart (While Printing)



1. The Print signal starts the paper feed operation. If the light path of the Paper feed clutch sensor is opened while the Print singnal is ON, the Paper feed clutch is engaged.
2. The moment the light path of the Pressure detection sensor senses the light, the Pressure solenoid is turned on consecutively when the light path of the Paper sensor is shut off.
3. If the light path of the Paper sensor is not shut off the moment the light path of the Pressure detection sensor senses the light, the Pressure solenoid will be turned off once, and turned on again when the next sheet shuts off the light path of the Paper sensor.



(1) The convex of the Pressure cam raises the bearing of the Linking plate.
(2) The Upper link raises the Pressure spring, thus raising the Lower link.
(3) The Hook lever assembly is lowered.
(4) The Pressure lever is lowered and the Pressure roller is raised.
(5) The Upper link is further raised after the Pressure roller presses against the Drum. As a result, the Pressure spring is expanded to apply a pressure.

A: Linking plate
B: Pressure link (top)
C: Pressure link (bottom)
D: Pressure lever
E: Pressure hook
F: Pressure solenoid
G: Hook

LED PSEN Paper sensor
– Light up when light path is blocked
Test Mode No. 6 Paper sensor
– Short interval beeps when light path is blocked

2. Press System (Activate by Drum Angle)

- Conversion of Rotation to Up-and-Down Motion via Pressure Cam

The Pressure cam, which is attached to the Main pulley, continuously rotates clockwise via the Main belt, which drives the Main pulley, when the Main motor rotates.

The rotation of the Pressure cam provides the drive for the Linking plate.

As the cam follower of the Linking plate contacts the Pressure cam, the high and low points of the cam convert the rotation movement of the cam to an up-and-down motion of the Linking plate.

- The Up-and-Down Motion of Pressure Hook

The up-and-down motion of the Linking plate is conveyed to the Pressure hook through the Pressure links. The Pressure hook moves up and down with the Pressure shaft as the fulcrum.

- Operation of Pressure Solenoid

The Pressure solenoid, which is attached to the Pressure hook and Hook lever assembly, functions to engage the Hook lever assembly with the Pressure lever.

- Control of Pressure Solenoid

The Pressure solenoid is activated ON when paper is detected by the Paper sensor while the Print signal is output (ON). When the Pressure solenoid is activated ON, the Hook lever assembly is engaged with the Pressure lever.

The Pressure solenoid will remain turned on at certain Drum angle if the next sheet of paper has reached the paper sensor.

For this reason, the Hook assembly is kept hooked on the Pressure lever.

If the next sheet has not reached the Paper sensor, on the contrary, the Pressure solenoid will be turned OFF once, and turned on again when the next sheet is detected by the Paper sensor.

- Lifting of Pressure Roller

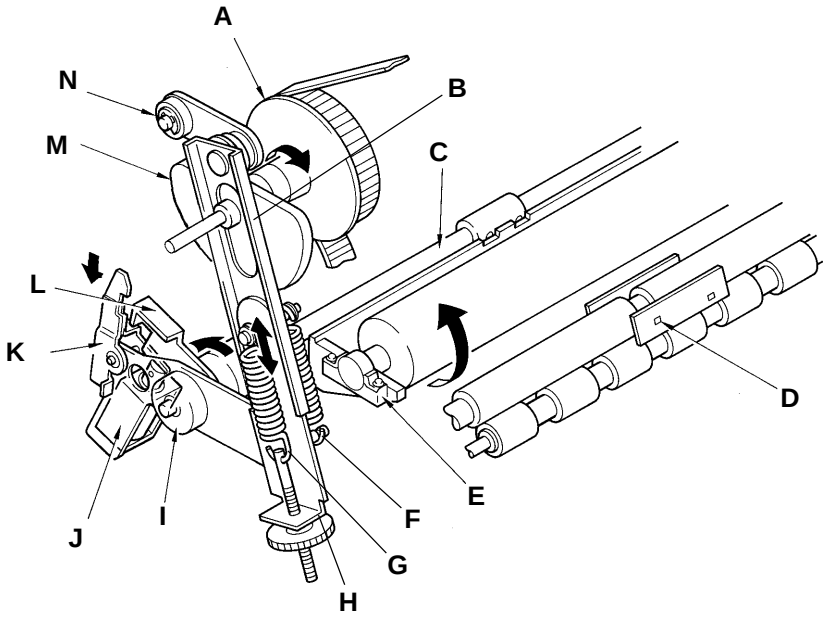
While the Hook lever assembly is engaged with the Pressure lever, the Pressure lever is pulled down by the descending Hook lever, turning the Pressure shaft counter-clockwise because the Pressure lever is attached on the Pressure shaft.

To the Pressure shaft is attached the Pressure roller support on which the Pressure roller is placed. Therefore, when the Pressure shaft rotates counter-clockwise, the Pressure roller is lifted up to the Drum, pressing a sheet of paper against the Drum.

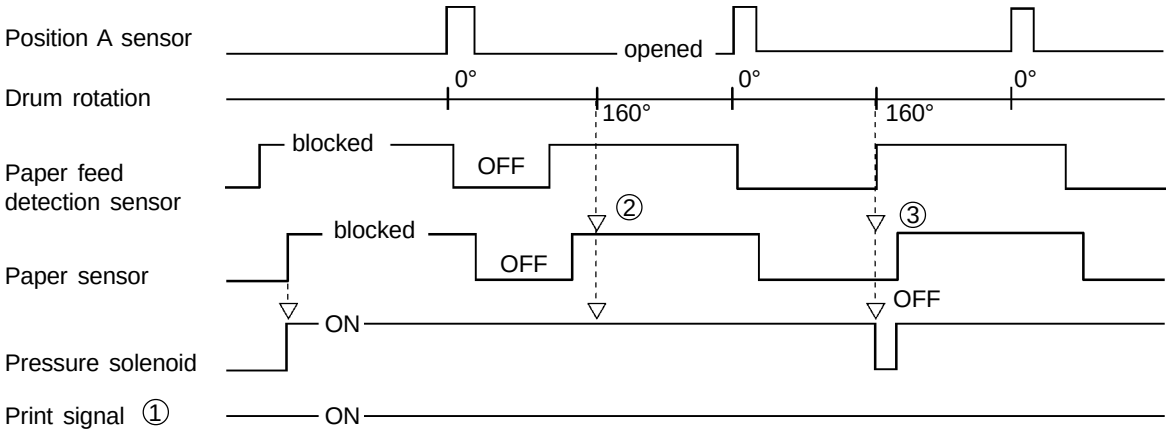
- Function of Pressure Links

While the Pressure roller is in contact with the Drum, the Pressure link (top) is raised by the Pressure cam, pulling the Pressure springs A and B to apply pressure to the Drum and transfer ink from the Drum onto a sheet of paper.

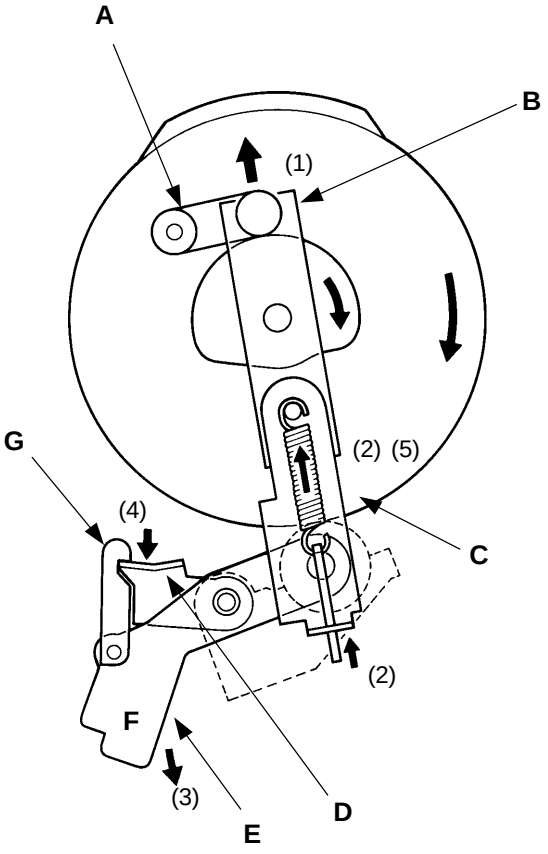
A: Main shaft
B: Pressure link (top)
C: Pressure shaft
D: Paper sensor
E: Pressure roller support
F: Pressure spring B
G: Pressure spring A
H: Pressure link (bottom)
I: Pressure hook
J: Pressure solenoid
K: Hook lever assembly
L: Pressure lever
M: Pressure cam
N: Linking plate



Pressure Solenoid Operation Timing Chart (While Printing)



1. The Print signal starts the paper feed operation. If the light path of the Paper feed clutch sensor is opened while the Print signal is ON, the Paper feed clutch is engaged.
2. The moment the Drum rotates 160° from the 0° position, the Pressure solenoid is turned on consecutively when the light path of the paper sensor is blocked.
3. If the light path of the Paper sensor is not blocked at Drum angle 160°, the Pressure solenoid will be turned OFF once, and turned ON again when the next sheet is detected by Paper sensor.



(1) The convex of the Pressure cam raises the bearing of the Linking plate.
(2) The Upper link raises the Pressure spring, thus raising the Lower link.
(3) The Hook lever assembly is lowered.
(4) The Pressure lever is lowered and the Pressure roller is raised.
(5) The Upper link is further raised after the Pressure roller presses against the Drum. As a result, the Pressure spring is expanded to apply a pressure.

A: Linking plate
B: Pressure link (top)
C: Pressure link (bottom)
D: Pressure lever
E: Pressure hook
F: Pressure solenoid
G: Hook

LED PRP Pressure control sensor
– Light up when light path is opened
Test Mode No. 53 Pressure control sensor
– Short interval beeps when light path is blocked

3. Pressure Regulation System

- Basic

The printing density is changed by turning ON the Pressure control motor.
The Pressure control motor changes the printing pressure by controlling the length of the Pressure springs.
The printing pressure, broken down into 18 levels, is determined by the print density setting, print speed setting and the temperature of ink (inside the drum).
The Pressure control sensor keeps track of the initial pressure position (home position).

- Pressure Regulation System

The pressure control motor rotates up or down to a specified position.
This motion is conveyed to the Print pressure adjustment screw via the Print pressure adjustment gear, changing the tension (pull power) of the Pressure spring, which changes the print pressure.
An encoder sensor is attached on top of the Pressure control motor to count the number of rotation the motor has made.

- Initial Pressure Position (home position) -- Pressure Level No.13

The machine looks for the initial pressure position each time the main power is turned ON or All Reset button is pressed.
In this case, the Pressure control motor operates depending on the condition of the Pressure control sensor, as described below.

- **If the light path of the Pressure control sensor is open ;**
  The Pressure control motor rotates until the light path is blocked by the Bracket B, then rotates in the reverse direction until the light path is opened again.
- **If the light path of the pressure control sensor is blocked by the Bracket B:**
  The Pressure control motor rotates until the light path of the sensor is opened.

The initial (home) pressure position of the printing pressure is Level No.13 Once the initial pressure position is achieved, the Pressure control motor rotates until the pressure level is adjusted to the equivalent of Print speed No.1. The printing starts from the low speed and is increased, changing the pressure at the same time, until a selected speed is achieved.

- At Speed-change Mode

When the Print speed button on the operation panel is pressed to change the printing speed, the pressure is increased as the speed is increased to keep the print density constant.

[Note] If the Print speed button is pressed while the machine is in idle, the Pressure control motor does not rotate until printing starts.

- At Density-change Mode

When the Print density button on the operation panel is pressed to change the print density, the pressure is increased as the density is increased.

<Density Setting 3(Black Drum Used) at Speed Mode>

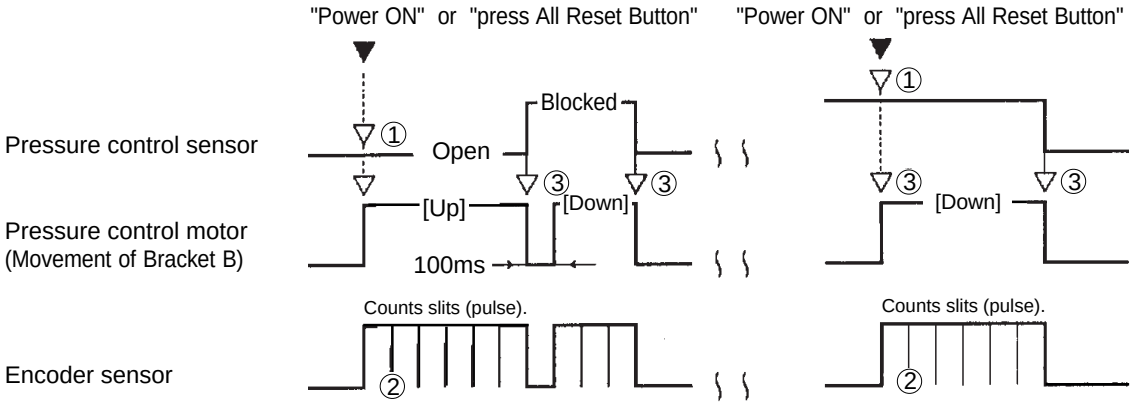
Drum Temperature \ Speed Mode	Fast Print	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5
Up to 9.0° (AB or above)	Level 21	Level 21	Level 23	Level 23	Level 23	Level 23
9.0 to 12.0° (AA to 9C)	Level 19	Level 17	Level 19	Level 23	Level 23	Level 23
12.0 to 15.0° (9B to 8D)	Level 15	Level 13	Level 15	Level 19	Level 23	Level 23
15.0 to 18.0° (8C to 7E)	Level 11	Level 9	Level 13	Level 15	Level 21	Level 23
18.0 to 21.0° (7D to 6F)	Level 7	Level 7	Level 11	Level 13	Level 19	Level 21
21.0 to 24.0° (6E or below)	Level 6	Level 7	Level 9	Level 11	Level 17	Level 19

- The pressure is the lowest at Level 6 and the highest at Level 23.
- The value in parentheses is a drum internal temperature AD value. The Test Mode No. 115 allows you to check the drum internal temperature and AD value.

Test Mode No.53 Pressure control sensor
– Short interval beeps when light path is blocked
No.114 Pressure variable operation
No.115 Drum thermistor AD Value & Temperature display

- Timing Chart -

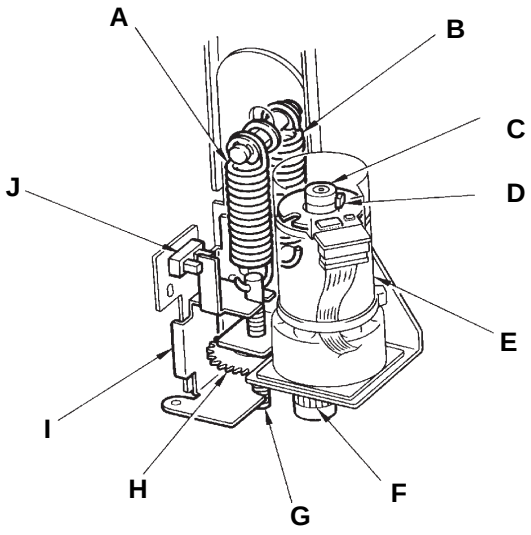
Pressure Regulation System (Initial Movement)



① When the power is turned ON or All reset button is pressed, the light path of the Pressure control sensor is checked.
② If no pulse is transmitted from the Encoder sensor within **100ms** after the Pressure control motor is turned ON, the machine assumes a Pressure control motor lock has occured and indicates the error code **[T 11]**.
③ If light path of the Pressure control sensor is not "blocked" or "opened" within **5 seconds** after the Pressure control motor is turned ON, the machine assumes a Pressure control motor lock has occured and indicates the error code **[T 11]**.

T11 (Pressure Motor Lock)
• Press control sensor not turned on/off • Pressure encoder sensor unchanged

A: Pressure spring A
B: Pressure spring B
C: Magnet Disc
D: Encoder sensor
E: Pressure control motor
F: Motor gear
G: Print pressure adjustment screw
H: Print pressure adjustment gear
I: Pressure control bracket B
J: Pressure control sensor



REMOVAL & ASSEMBLY

1. Main Shaft Face Plate

< Removal Procedure >

1. Open the Front cover and press the Drum home position button to set the Drum at the home position (Position A).
   Turn OFF the power and remove the Back cover.
2. Remove the Timing spring.
3. Loosen three mounting screws on the Paper feed clutch base and turn the Paper feed clutch unit clockwise to release the tension of the Main belt.
4. Loosen the allen screws securing the P disc and Pressure sensor disc and remove these discs.
5. Remove two mounting screws on the Pressure shaft face plate and remove the plate.
6. Disconnect the connectors of the Paper feed clutch sensor and Pressure detection sensor, and cut the wire clampers fastening the wire harnesses on the Main shaft face plate.
7. Remove six mounting screws on the Main shaft face plate and remove the plate.

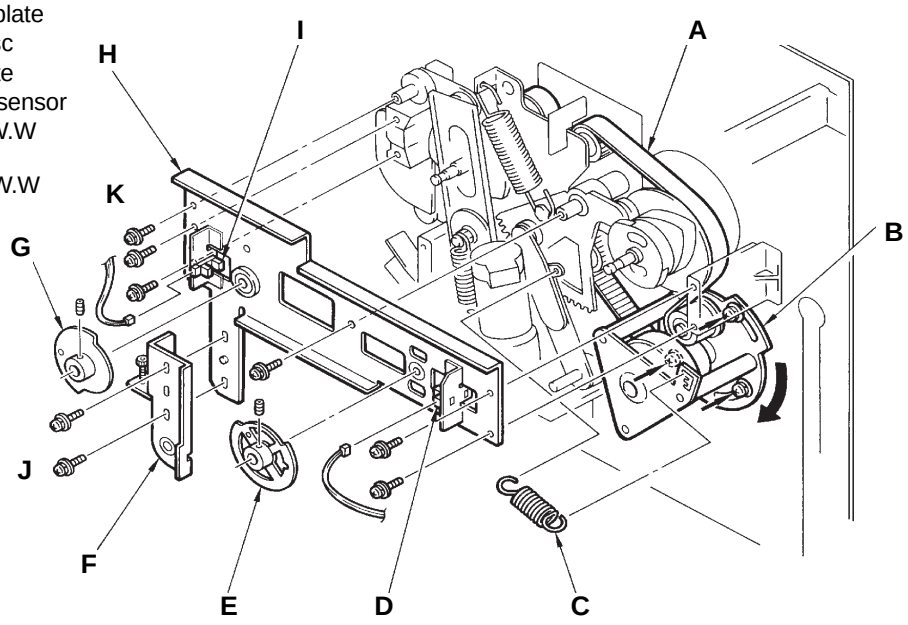
- Precautions in Assembly -

- After securing the Main shaft face plate, always check if the Drum can be smoothly pulled out of and pushed into the machine.
  If not, loosen the mounting screws on the Main shaft face plate and change the position of the plate to obtain the correct position of the Main shaft.

- Adjustments after Assembly -

- Resting Position of Pressure Lever (page 6A-3)
- Position of the Pressure sensor disc (page 6A-7)
- Position of the P Disc (page 4A-5)

A: Main belt
B: Paper feed clutch base
C: Timing spring
D: Paper feed clutch sensor
E: P disc
F: Pressur shaft face plate
G: Pressure sensor disc
H: Main shaft face plate
I: Pressure detection sensor
J: Pan-head screw SW.W M4X10
K: Pan-head Screw SW.W M4X10



2. Pressure Link Ass'y

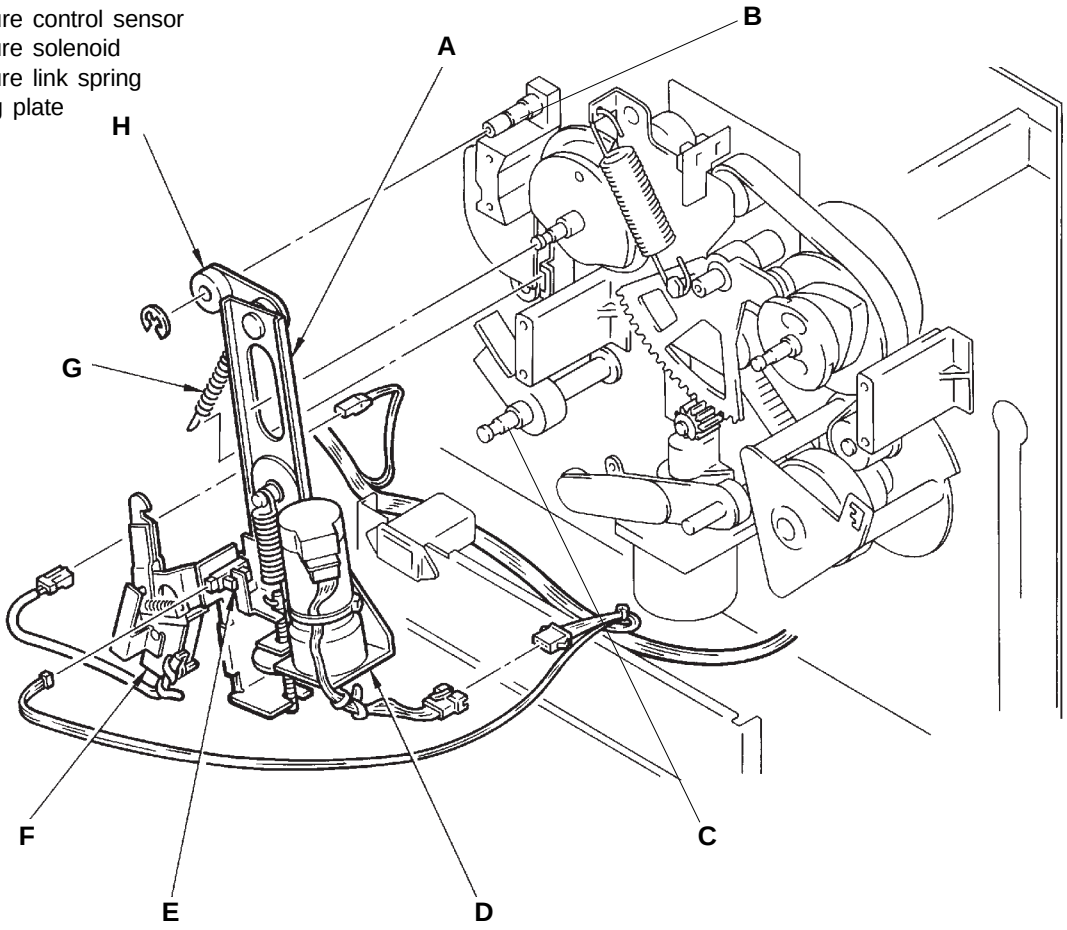
< Removal Procedure >

1. Remove the Main shaft face plate, referring to the previous page.
2. Disconnect the connectors of the following parts: Pressure control motor, Pressure control sensor and Pressure solenoid
3. Unhook the Pressure link spring at the lower point.
4. Remove an E ring on the Linking plate shaft and then remove the Pressure link ass'y (which includes the Pressure hook), sliding the Linking plate and the Pressure hook off the respective shafts.
   [IMPORTANT]
   Never force the Pressure link ass'y off the Drive base unit to avoid deformation of the Pressure links. If they are deformed, they will not smoothly move up and down after assembly.

- Adjustments after Assembly -

- Resting Position of Pressure Lever (page 6A-3)
- Position of the Pressure sensor disc (page 6A-7)
- Position of the P Disc (page 4A-5)

A: Pressure link ass'y
B: Pressure link shaft
C: Pressure shaft
D: Pressure control motor
E: Pressure control sensor
F: Pressure solenoid
G: Pressure link spring
H: Linking plate



3. Pressure Lever, Pressure Shaft

Pressure Lever
< Removal Procedure >

1. Remove the Pressure link ass'y, referring to the previous page.
2. Unhook the Pressure lever spring at the upper point.
3. Loosen two allen screws securing the Pressure lever and then remove the Pressure lever, sliding it off the Pressure shaft.

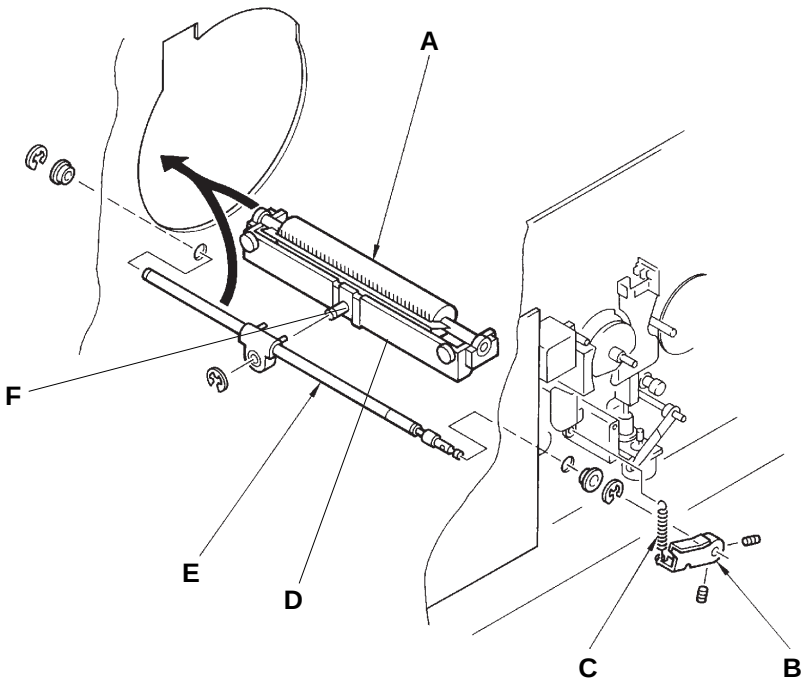
Pressure Shaft
< Removal Procedure >

1. Remove the Pressure lever, referring above.
2. Take out the Drum from the machine.
3. Remove the Paper receiving tray and Suction cover plate.
4. Remove the mounting screws on the Suction unit and pull out the unit a little to make space for removal of the Pressure shaft.
5. Remove E rings and collars at both ends of the Pressure shaft, and then take out the shaft from the opening for the Drum installation.
6. Remove an E ring on the Center shaft of the Pressure roller support and separate the Pressure roller support from the Pressure shaft.

- Adjustments after Assembly -

- Installation Position of Pressure Lever (page 6A-1)
- Resting Position of Pressure Lever (page 6A-3)
- Position of the Pressure Sensor Disc (page 6A-7)
- Position of the P Disc (page 4A-5)

A: Pressure roller
B: Pressure lever
C: Pressure lever spring
D: Pressure roller support
E: Pressure shaft
F: Center shaft



4. Pressure Roller

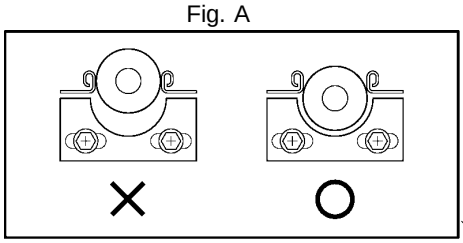
< Removal Procedure >

1) Take out the Drum from the machine and turn OFF the power.
2) Pull up the sfaft of the Pressure roller and take it out.

- Precautions in Assembly-

- When reattaching the Pressure roller to the Pressure support, fit the upper and lower positions, and left and right positions of the bearing as shown in Fig. A and Fig. B.
- If the bearing is not insert firmly as marked with X in Fig. A, the Pressure roller will contact only on one side, causing a leakage of ink and breakage of the Drum body.
- Clean the surface of the Pressure roller periodically because paper powder, ink, etc. adhere. *After cleaning, apply powder to the pressure roller.

Fig. A



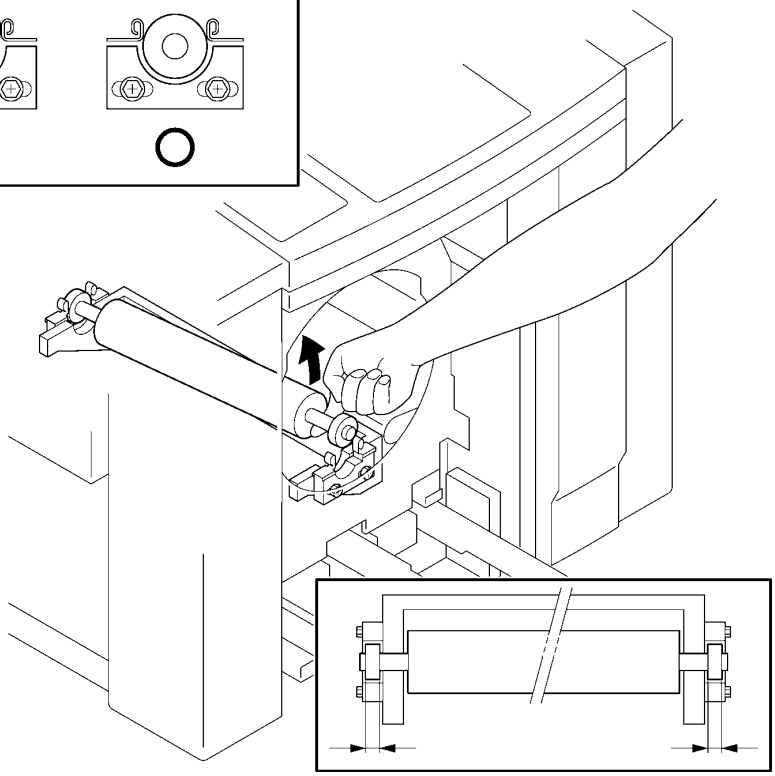


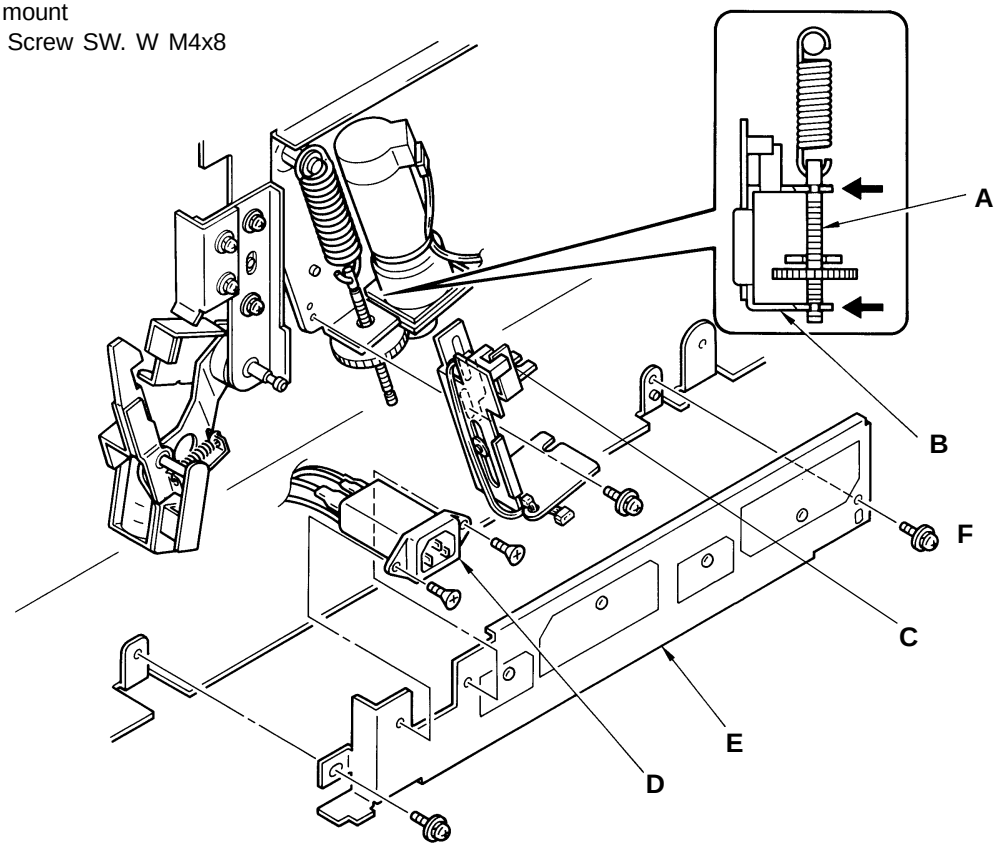
Fig. B

ADJUSTMENT

1. Installation Position of Pressure Lever

1. Put a blank master on the Drum by selecting confidential master making.
2. Remove the Back cover and set the Drum at the home position (Position A).
   Turn OFF the power.
3. Insert a bar into the hole on the end of the Pressure shaft and turn the shaft counter-clock-wise with the bar to press the Pressure roller closely against the Drum.
   Keeping the Pressure shaft in this condition and pushing the Hook lever against the Pressure lever as shown in the figure on the next page, check if the distance from the top edge of the angular hole of the Hook lever to the top face of the bent part of the Pressure lever is **4.5 to 5.5mm**.
4. If not, adjust the installation position of the Pressure lever as follows.
   1) Remove two mounting screws on the Inlet terminal and let it free.
   2) Remove two mounting screws on the Connector mount and then remove it.
   3) Disconnect the connector of the Pressure control sesnor.
      Remove the securing screw on the Pressure control sesnor bracket and then remove the bracket.

A: Print pressure adjustment screw
B: Pressure control sensor bracket
C: Pressure control sensor
D: Inlet Terminal
E: Connetor mount
F: Pan-head Screw SW. W M4x8



4) Loosen the allen screws that secure the Pressure lever on the Pressure shaft.
5) Push down the Pressure lever and hold it at the position where the distance from the top edge of the angular hole of the Hook lever to the top face of the bent part of the Pressure lever is **4.5 to 5.5mm** when measured with the Hook lever pushed against the Pressure lever.

[IMPORTANT]
Hold the Pressure lever pressing it against the Pressure hook.

6) Insert a bar (a hexagonal wrench) into the hole on the end of the Pressure shaft, and turn the shaft counter-clockwise with the bar to press the Pressure roller closely against the Drum.
7) Keeping the Pressure lever and Pressure shaft in the conditions described above, tighten the allen screws to secure the Pressure lever on the Pressure shaft.

- Checks after Installation -

- Check whether the Pressure lever has been shifted to the near side.
- When the Pressure lever is manually pushed down and the Pressure roller stops in contact with the drum, check whether the distance is 4.5 to 5.5 mm.

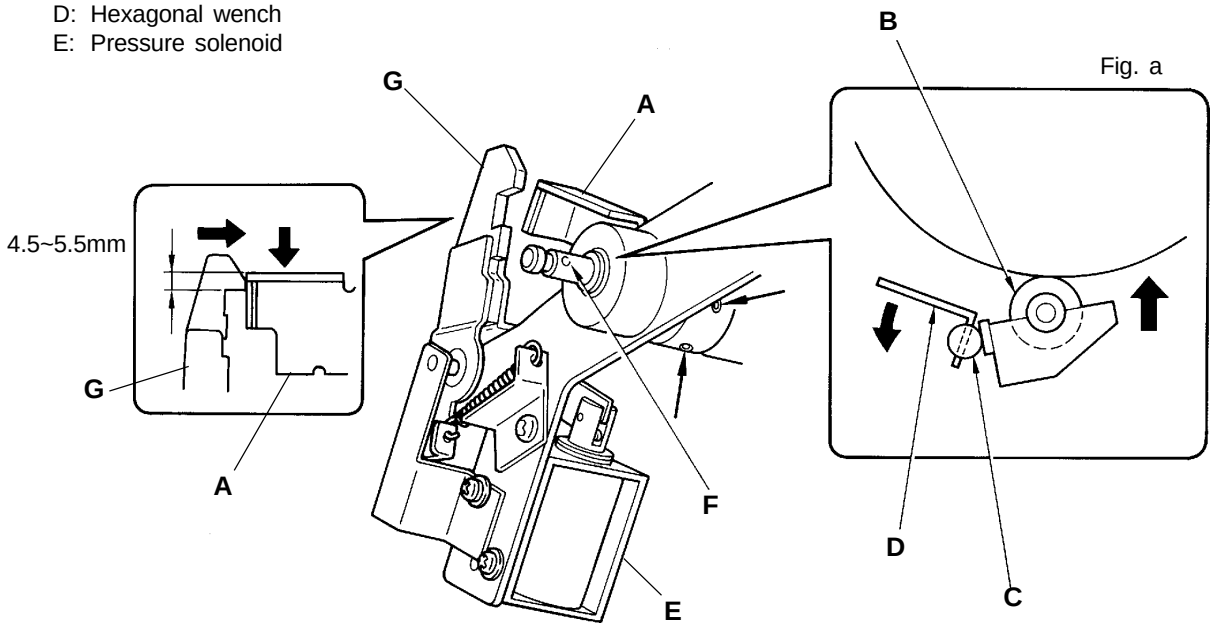
- Results of Misadjustment -

- If the Pressure lever is installed too low (the distance is **much less than 4.5mm**); the pressure of the Pressure roller will be too weak against the Drum, which causes printed to be light.
  Or the Pressure roller will not contact the Drum with enough pressure to transport a sheet through the print section, causing paper jam.
- If the Pressure lever is installed too high (the distance is **much more than 5.5mm**); the pressure of the Pressure roller will be too high against the Drum, which causes much stress on the Pressure links and Drum body and shortens their life.

Caution:
Insert the hexagonal wrench into the pressure shaft and turn in counterclockwise to apply a pressure to the pressure roller. If the wrench is not properly set, it may be broken even if you do not apply a strong force. Set as shown in Fig. a.

A: Pressure lever
B: Pressure roller
C: Pressure shaft
D: Hexagonal wench
E: Pressure solenoid
F: Pressure shaft
G: Hook lever

Fig. a



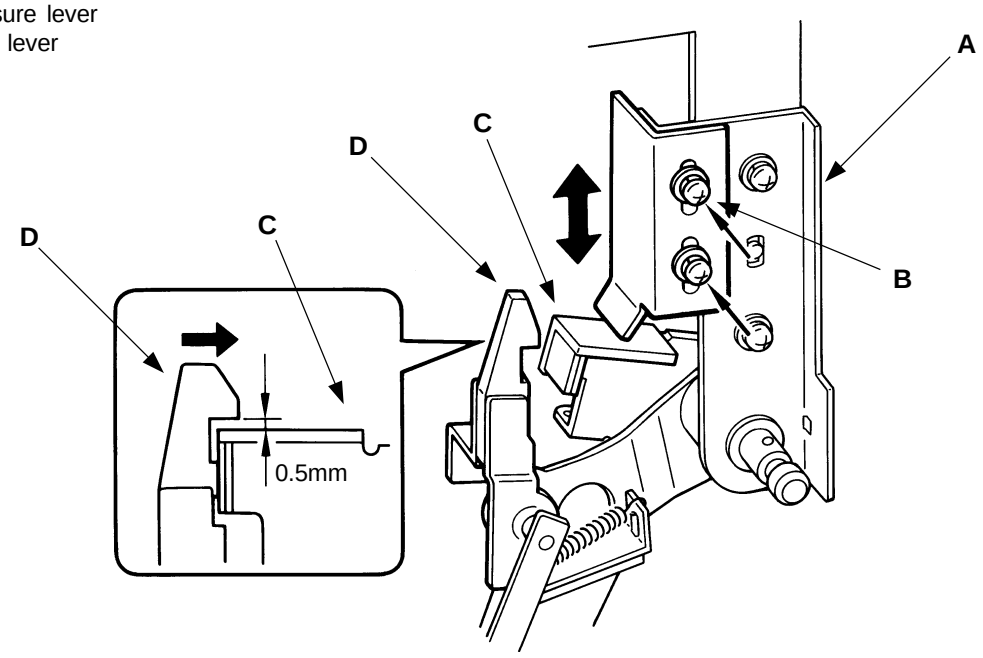
2. Resting Position of Pressure Lever (Pressure Roller)

1. Remove the Back cover.
2. Rotate the Drum by pressing **SW1** on the **System PCB** until the Hook lever comes up to the highest position.
   Turn OFF the power.
3. Push the Hook lever to the right and check if the distance from the top edge of the angular hole of the Hook lever to the top face of the bent part of the Pressure lever measures **0.5mm**.
4. If the specified value is not met, loosen two setscrews of the Pressure shaft face plate C and move it up/down to make adjustment.

- Results of Misadjustment -

- If the bent part of the Pressure lever is rested higher than the top edge of the angular hole of the Hook lever (the Pressure roller is rested too low);
  the Hook lever will not engage with the Pressure lever when the Pressure solenoid is activated ON, preventing the Pressure roller from lifting up to the Drum, which causes paper jam under the Drum.
- If the bent part of the Pressure lever is rested on the same level of the top edge of the angular hole of the Hook lever (the Pressure roller is rested a little too low);
  the Hook lever will not disengage from the Pressure lever when the Pressure solenoid is deactivated.
- If the bent part of the Pressure lever is rested much lower (**much more than 0.5mm**) than the top edge of the angular hole of the Hook lever (the Pressure roller is rested too high);
  the Pressure roller will contact the Clamp section on the Drum, which can damage the Clamp section and/or the Pressure roller.

A: Pressure shaft face plate BII
B: Pressure shaft face plate C
C: Pressure lever
D: Hook lever



3. Position of Pressure Solenoid

1. Remove the Back cover.
2. Rotate the Drum by pressing **SW1** on the **System PCB** until the Hook lever comes up to the highest position.
3. Start up Test mode **No.68** to activate the Pressure solenoid and engage the Hook lever with the Pressure lever.
4. Check if the gap between the deepest point of the angular hole of the Hook lever and the edge of the bent part of the Pressure lever measures **0.8mm**.
5. If not, adjust the position of the Pressure solenoid as follows.
   A3 Model:
   Rough adjustment (Position of Pressure Solenoid)
   1) Start up Test mode No.68
   2) Loosen two mounting screws of the Pressure solenoid.
   3) Move up or down the Pressure solenoid until the gap measures 0mm.
   4) Tighten the mounting screws to secure the Pressure solenoid.
   Fine adjustment (Position of Pressure hook stopper)
   5) Loosen a mounting screw of the Pressure hook stopper.
   6) Move up the stopper until the gap measures 0.8mm.

   Other Model:
   1) Loosen two mounting screws of the Pressure solenoid.
   2) Move up or down the Pressure solenoid.
   3) Tighten the mounting screws to secure the Pressure solenoid and check the gap.
   4) Repeat the procedures in the steps 1) to 3) above until the gap measures 0.8mm.

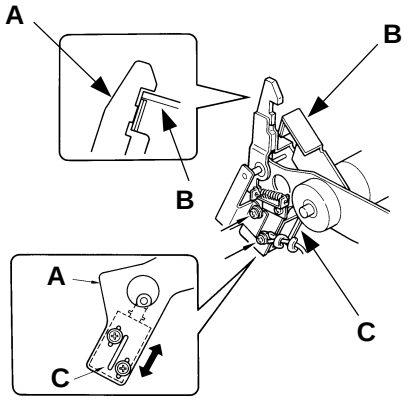
- Precautions in Adjustment -

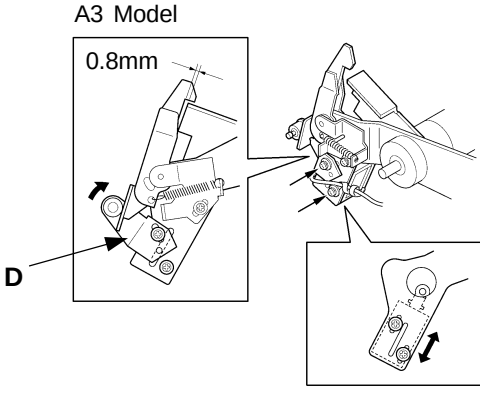
- Perform printing at the highest and lowest speeds and confirm that the Hook lever closely engages with the Pressure lever during printing.

- Results of Misadjustment -

- If the Hook lever engages with the Pressure lever too shallow (the gap is **much more than 0.8mm**);
  the Hook lever will slip off the Pressure lever, preventing the Pressure roller from lifting up to the Drum, which causes paper jam under the Drum.
  This condition may eventually cause damages to the Hook lever and Pressure lever.
- If the Hook lever engages with the Pressure lever too deep (the gap is **none** and the Pressure solenoid is positioned too low);
  the plunger of the Pressure solenoid will not be pulled in when the solenoid is activated ON, preventing the Pressure roller from lifting up to the Drum, which causes paper jam under the Drum.

A: Hook lever C: Pressure solenoid
B: Pressure lever D: Pressure hook stopper





4. Resting Position of Hook Lever

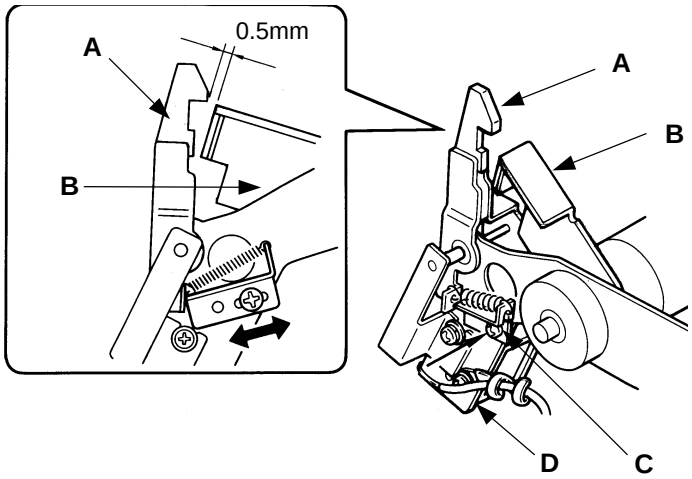
1. Remove the Back cover.
2. Rotate the Drum by pressing **SW1** on the **System PCB** until the top edge of the angular hole of the Hook lever is on a level with the top face of the bent part of the Pressure lever.
   Turn OFF the power.
3. Check if the minimum gap between the Hook lever and the edge of the bent part of the Pressure lever measures **0.5mm**.
4. If not, adjust the resting position of the Hook lever as follows.
   1) Loosen the mounting screw on the Hook spring plate attached on the Pressure hook.
   2) Move the Hook spring plate to the left or right to adjust the gap to 0.5mm.
   3) Tighten the mounting screw to secure the Hook spring plate.

- Precautions in Adjustment -

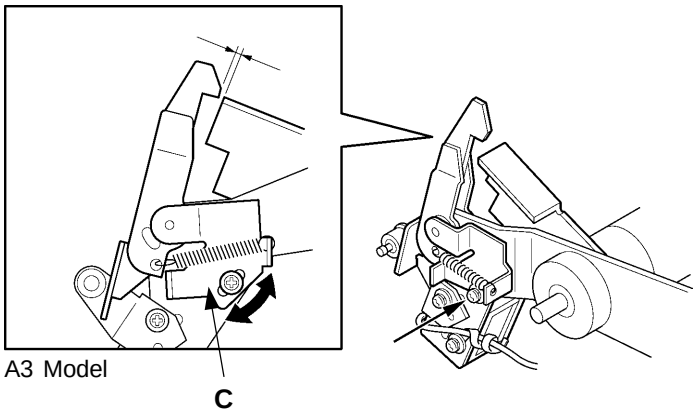
- Match a boss on the Pressure hook with a hole on the Hook spring plate when securing the plate.

- Results of Misadjustment -

- If the gap is too narrow **(much less than 0.5mm**);
  the Hook lever will catch the Pressure lever when the Pressure solenoid is not activated ON, keeping the Pressure roller pressed against the Drum.
- If the gap is too wide **(much more than 0.5mm**);
  the Hook lever will not engage with the Pressure lever when the Pressure solenoid is activated ON, preventing the Pressure roller from lifting up to the Drum, which causes paper jam under the Drum.



A: Hook lever
B: Pressure lever
C: Hook spring plate
D: Pressure solenoid



A3 Model

LED PRP Pressure control sensor
– Light up when light path is opened
Test Mode No.53 Pressure control sensor
– Short interval beeps when light path is blocked

5. Standard Pressure Position

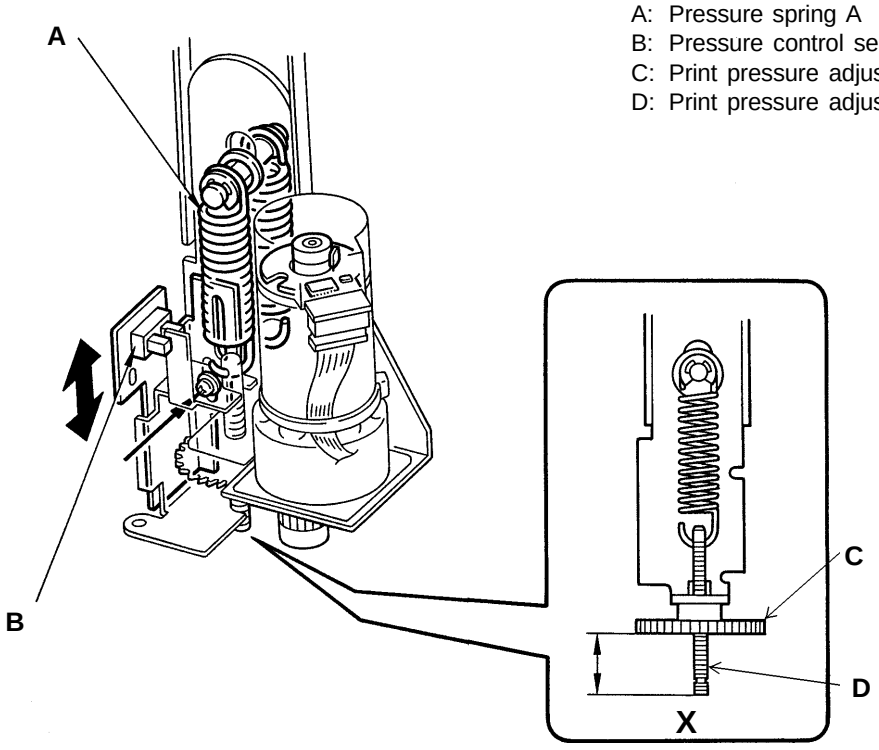
1. Pull out the Drum and Remove the Back cover.
2. Turn ON the power.
   The Print pressure is automatically set at the initial position.
3. Turn OFF the power.
4. Measure the **[X]**, i.e. length from the end of the Print pressure adjustment screw to the bottom face of the Print pressure adjustment gear.
5. The measurement should close to the value on the chart to the right.
6. If not, loosen the mounting screw of the Pressure control sensor bracket, as indicated by an arrow in the sketch below, and adjust the position.
7. Turn ON the power again and measure the **[X]** to confirm that the correct value as indicated in the chart is given.

Drum Type	Standard Value
Legal / A4	X = 17.5 mm
B4	X = 18.5 mm
Ledger / A3	X = 18.5 mm

- Phenomenon -

Too high a pressure results in too dark print. It also gives a burden to the drum, resulting in a leakage of ink or cracks on the Drum. On the contrary, too low a pressure results in too light print, causing a leakage of ink.

A: Pressure spring A
B: Pressure control sensor
C: Print pressure adjustment gear
D: Print pressure adjustment screw



- At the factory, the machines are adjusted by special Jig to position the Pressure control sensor. Some machines are not within the above-mentioned reference range. The reference range is only a service guideline.

6. Position of Pressure Sensor Disc

1. Remove the Back cover.
2. Set the Drum at the home position (Position A).
   Turn OFF the power.
3. In this state, make sure that two resisterline marking on the Pressure sensor disc are aligned with the Pressure detection sensor.(See Fig. a)
4. If not, first check if the hole on the Main shaft face plate is aligned with the counterpart on the Pressure cam
   If it is not aligned, adjust the arrangement of the Pressure cam.
5. If they are dislocated, loosen the allen screw of the Pressure sensor disc, align the alignment hole so that the two resisterline marking will be located above and below the Pressure detection sensor, and tighten the screw to fix.

- Precautions in Adjustment -

- Make sure that the Pressure sensor disc doesn't get contact with the inner surface of the Pressure detection sensor at any position by rotating the Pressure sensor disc with a press of SW1 on the System PCB.

- Results of Misadjustment -

- If the Pressure sensor disc is incorrectly positioned;
  the paper path through the Paper receiving sensor 1 will be checked out of time, which misleads the machine to assume that a printed sheet has jammed in the paper ejection section when no sheet actually jamms there.
  As a result, “PAPER JAM UNDER DROM PULL OUT DRUM” will be displayed on the operation panel.

A: Pressure detection sensor
B: Alignment hole
C: Pressure sensor disc
D: Alignment hole of Pressure cam
E: Alignment hole on Main shaft face plate

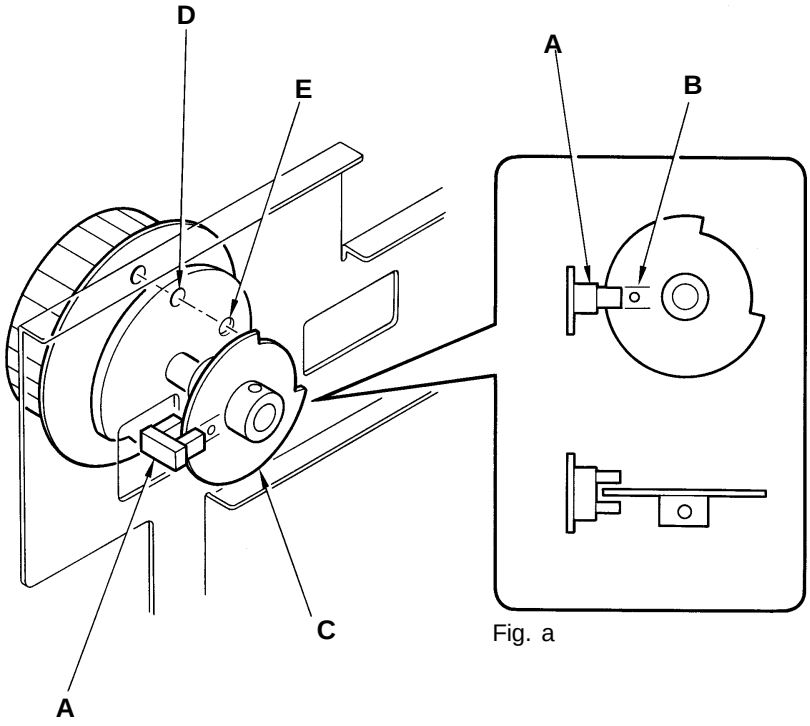


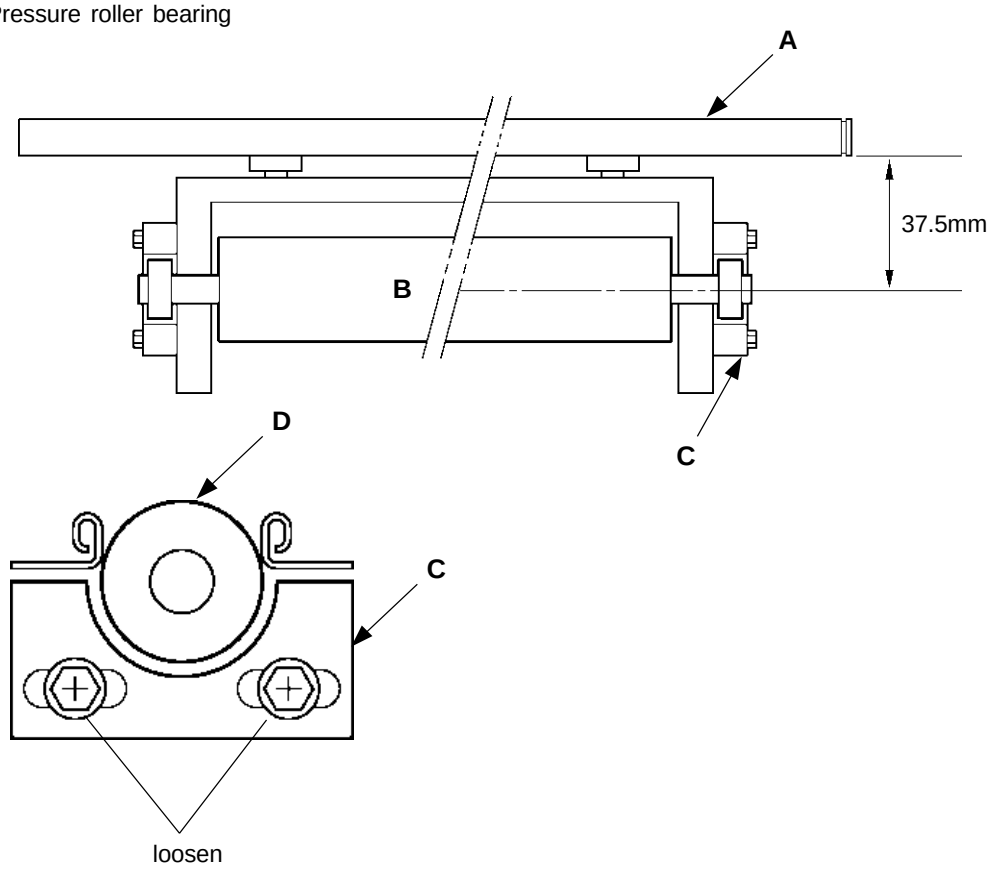
Fig. a

7. Parallelism of Pressure Roller

- Checking and Method-

1) Print multiple sheets of paper and check whether the master and screen are shifting toward the drive side or panel side.
2) If they are, make the following adjustment.

- Adjustment-

1) Remove the Pressure shaft assembly(page 6R-3)
2) Check whether the shaft center of the Pressure roller is distanced 37.5 mm(reference value) from the inside of the pressure shaft assembly.
3) If not, loosen the hexagon cross recessed head bolts of the Pressure roller holder to make adjustment.
4) Make sure that the reference value is met on both left and right sides.

A: Pressure shaft assembly
B: Pressure roller
C: Pressure roller support
D: Pressure roller bearing